

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A NON-
RADIOACTIVE AIR EMISSIONS NOTICE
OF CONSTRUCTION APPLICATION FOR
THE INTEGRATED DISPOSAL FACILITY
AT THE HANFORD SITE FOR THE UNITED
STATES DEPARTMENT OF ENERGY,
OFFICE OF RIVER PROTECTION

) NOC APPROVAL ORDER
) NUMBER: DE05NWP-004
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To: Mr. Roy J. Schepens
United States Department of Energy
Office of River Protection
P.O. Box 450
Richland, Washington 99352

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REGULATORY AUTHORITY:

Chapter 70.94 of the Revised Code of Washington (RCW) authorizes the Washington State Department of Ecology (Ecology) to implement and enforce the Washington Clean Air Act. Pursuant to Ecology's General Regulations for Air Pollution Sources, Chapter 173-400 Washington Administrative Code (WAC), and Controls for New Sources of Toxic Air Pollutants, Chapter 173-460 WAC, Ecology now finds the following:

FINDINGS:

1. A Notice of Construction (NOC) application for operation of the Integrated Disposal Facility (IDF) (Reference 1) was submitted by the United States Department of Energy (USDOE) on March 23, 2005, and received by Ecology on March 28, 2005. Ecology determined that the application was complete on April 26, 2005 (Reference 2).
2. Hanford is an existing major stationary source that emits more than 250 tons of a regulated pollutant per year.
3. Hanford is located in a Class II Area designated as "attainment" for the purpose of NOC permitting for all air pollutants.
4. The proposed project consists of operation of the Integrated Disposal Facility (IDF), a new low-level waste (LLW) and mixed low-level waste (MLLW) landfill that supports the Hanford Site environmental remediation activities.

5. The IDF is located in the Hanford 200 East Area on a 170-acre parcel located north of 1st Avenue and south of 4th Street, between the Plutonium-Uranium Extraction Plant and the 200 East Area Power Plant.
6. The IDF consists of two disposal cells with equally sized capacities of 450,000 m³ each. Cell 1 will be utilized for the disposal of MLLW and Cell 2 for LLW.
7. RCW 43.21C, the State Environmental Policy Act (SEPA), and WAC 197-11, SEPA Rules, require SEPA review of the environmental impacts of a proposed facility. Ecology has determined that the IDF does not have a probable significant adverse impact on the environment. Ecology performed an environmental review of the proposed IDF operation, and issued a SEPA Mitigated Determination of Non-significance (MDNS) with the draft dangerous waste permit.
8. Emissions of criteria pollutants from the IDF are below the Prevention of Significant Deterioration Significant Emission Rates.
9. Criteria air pollutant emissions from the project exceed the *de minimus* levels in WAC 173-400-110(5)(d). Unmitigated particulate matter (PM) emissions estimates are 12.10 tons/year and unmitigated fine particulate matter (PM10) emission estimates are 4.19 tons/year as detailed in Table 1.

Table 1: Integrated Disposal Facility Particulate Matter Estimates *

	Unmitigated (tons/yr)		Mitigated (tons/yr) **	
	PM	PM10	PM	PM10
Aggregate Use	5.39E-01	2.55E-01	1.08E-01	5.09E-02
Travel on Unpaved Roads	9.59E+00	2.46E+00	1.92E+00	4.93E-01
Compacting	1.94E+00	1.46E+00	3.89E-01	2.91E-01
Aggregate Storage Pile Wind Erosion	2.31E-02	1.16E-02	3.47E-03	1.73E-03
TOTAL	1.21E+01	4.19E+00	2.42E+00	8.37E-01
WAC 173-400-110(5) Exemption Level	1.25E+00	7.50E-01		

* AP-42 (fifth edition) emission calculations

** Average 80% reduction estimated in AP-42 (see Section 1.0: Best Available Control Technology)

10. The mitigated PM emissions shown above were calculated using an emission reduction value of 80% (AP-42). The IDF Operations Dust Control Plan (Reference 3) is consistent with the AP-42 guidelines to control PM emissions during operation of the facility.
11. The IDF will provide Best Available Control Technology (BACT) for PM control as detailed in the NOC application (Reference 1) and the Operations Dust Control Plan (Reference 3).
12. Toxic air pollutants, as defined in WAC 173-460, from the IDF are not expected to exceed the small quantity emission rates defined in WAC 173-460-080.

13. The proposed project, if operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC and Chapter 173-460 WAC, and the operation thereof will not result in ambient air quality standards being exceeded.

THEREFORE, IT IS ORDERED that the project as described in said Notice of Construction Application, and as detailed in emissions estimates and impact and control technology assessments submitted to Ecology in reference thereto, is approved for construction, installation, and operation, provided compliance with the conditions and restrictions described below. This Order shall be identified as NOC Order **DE05NWP-004**. The effective date of this authorization shall be that as signed in Section 5.0.

References:

1. 05-ED-024, Non-radioactive Air Emissions NOC Application for Operation of the Integrated Disposal Facility, from Roy Schepens of U.S. Department of Energy, Office of River Protection, to Michael Wilson, Washington State Department of Ecology, dated March 23, 2005
2. Completeness Determination Review of Non-radioactive Air Emission NOC Application for the Integrated Disposal Facility, from Michael Wilson, Washington State Department of Ecology to Roy Schepens, U.S. Department of Energy, Office of River Protection, dated April 26, 2005
3. RPP-25732, IDF Operations Dust Control Plan, by D. C. Comstock, CH2M Hill Hanford Group, dated April 2005

1.0 BEST AVAILABLE CONTROL TECHNOLOGY

WAC 173-400-113 requires the use of BACT to control emissions. This project will use measures described in this Order, in the NOC Application, and in the IDF Operations Dust Control Plan to attain BACT.

BACT for the IDF has been determined to be the dust control methods to be used for the IDF operation. The methods includes watering, use of chemical stabilizer, use of vegetative stabilization, use of physical barriers and/or physical stabilization, covering haul vehicles, minimizing track-out, clearing only limited areas to reduce dust generation, controlling site traffic to decrease disturbance of soil and vegetation, etc. Control technologies required for specific IDF operations are addressed below.

1.1 Waste Covering Operations

Aggregate, a mixture of minerals, sand and soil, will be used to cover the waste package at the IDF. Dust control for covering the IDF waste package will consist of watering and possible use of chemical wetting agents. Work will be curtailed during high winds, and chemical stabilization will be used on disturbed areas when long periods of inactivity are anticipated.

1.2 Travel on Unpaved Roads

Watering will be utilized on roads as the preferred periodic surface treatment, while chemical stabilization will also be considered for application on unpaved roads during long periods of inactivity. Other controls include speed limit, regular maintenance of road surface and minimizing vehicle use on unpaved roads.

1.3 Aggregate Cover Compacting Activities

A water truck will be provided for compaction. The truck will be operated as needed to spray water for compaction. Work will be curtailed during high winds and chemical stabilization will be used on disturbed areas when long periods of inactivity are anticipated.

1.4 Wind Erosion of Aggregate Storage Pile

Watering will be utilized during storage pile operations, work will be curtailed during high winds, and chemical stabilization will be used on disturbed areas when long periods of inactivity are anticipated. Other controls include minimizing vehicle traffic and areas of disturbance.

2.0 APPROVAL CONDITIONS

The approval conditions for the IDF operation are focused on PM-mitigation BACT compliance and record-keeping verification.

2.1 Emission Limits

2.1.1 Waste Covering Operations

- 2.1.1.1 During waste covering operations, aggregate will be used to cover the waste package at the IDF.
- 2.1.1.2 Dust control for covering the waste package will consist of watering and/or chemical wetting agents.
- 2.1.1.3 Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds.
- 2.1.1.4 Prior to long periods of inactivity, an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.

2.1.2 Travel on Unpaved Roads

- 2.1.2.1 Surface treatment for dust control will consist of watering and/or chemical stabilization.
- 2.1.2.2 Minimize vehicle use on unpaved road.

- 2.1.2.3 Perform regular maintenance of road surface.
- 2.1.2.4 Reduce vehicle speed limit on unpaved roads.

2.1.3 Aggregate Cover Compacting Activities

- 2.1.3.1 A water truck will be provided, and operated as needed to spray water for compaction.
- 2.1.3.2 Waste covering operations will be curtailed during high winds in accordance with abnormal operating procedures for high winds.
- 2.1.3.3 Prior to long periods of inactivity an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.

2.1.4 Aggregate Storage Pile

- 2.1.4.1 Watering will be utilized to minimize wind erosion during storage pile operation.
- 2.1.4.2 Storage pile work will be curtailed during high winds in accordance with abnormal operating procedures for high winds.
- 2.1.4.3 Prior to long periods of inactivity an assessment shall be made to implement more comprehensive dust control methods, such as chemical stabilization, on disturbed areas. A reassessment will be made once per week.
- 2.1.4.4 Minimize vehicle traffic.
- 2.1.4.5 Minimize areas of disturbance.

2.2 Compliance Demonstration

Compliance with Approval Condition 2.1 shall be demonstrated with retention of records detailed in Approval Condition 4.0.

2.3 General Standards

- 2.3.1 WAC 173-400-040(3) Fugitive emissions: The owner or operator of any emission unit engaging in material handling, construction, or other operation which is a source of fugitive emission shall take reasonable precautions to prevent the release of air contaminants from the operation.
- 2.3.2 WAC 173-400-040(8) Fugitive dust: The owner or operator of a source of fugitive dust shall take reasonable precautions to prevent fugitive dust from becoming airborne and shall maintain and operate the source to minimize emissions.

2.4 Obligations under Other Laws or Regulations

Nothing in this Approval Order shall be construed to relieve the Permittee of its obligations under any local, state, or federal laws or regulations.

3.0 NOTIFICATIONS AND SUBMITTALS

3.1 Addressing

Any required notifications and submittals required under these Approval Conditions shall be sent to:

Washington State Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

3.2 Operational Notice

Notification will be made at least ten (10) days prior to initial operation of the facility.

4.0 RECORD-KEEPING

Dust control measures to be performed and as performed will be incorporated into daily activity reports, logs, pre-job reviews, post-job reviews, management assessments, surveillances or similar documents to ensure that these activities are carried out when needed. The records shall be kept on the Hanford Site by the Permittee and made available for inspection for compliance verification by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent sixty (60) month period.

5.0 APPROVAL ORDER AND RESTRICTIONS

Operation of the IDF is intended for the safe disposition of LLW and MLLW in support of the Hanford Site environmental remediation activities. The IDF will consist of two disposal cells. Cell 1 will be utilized for the disposal of MLLW, and cell 2 for LLW. The approved operation shall be consistent with the NOC Application and the Conditions of this Approval Order. A new NOC Application shall be required if it is determined that facility expansion is needed or alternative operations are required.

This Authorization may be modified, suspended, or revoked in whole, or in part, for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this Approval Order
2. Obtaining this authorization by misrepresentation, or failure to fully disclose all relevant facts

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

Any person aggrieved by this ORDER may obtain review thereof by application, within thirty (30) days of receipt of this order, to:

Pollution Control Hearings Board
P.O. Box 40903
Olympia, Washington 98504-0903

Concurrently, copies of the application must be sent to:

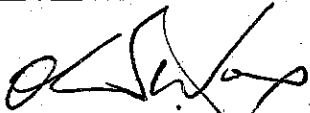
Washington State Department of Ecology
P. P. Box 47600
Olympia, Washington 98504-7600

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

These procedures are consistent with the provisions of Chapter 43.21B RCW, and the rules and regulations adopted thereunder.

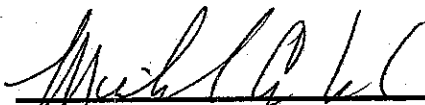
DATED at Richland, Washington, this 31st day of May 2005.

REVIEWED AND PREPARED BY:



Oliver S. Wang, P.E.
Nuclear Waste Program
Washington State Department of Ecology

APPROVED BY:



Michael A. Wilson, Program Manager
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Washington State Department of Ecology